BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

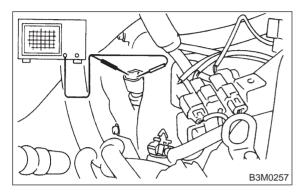
1T4A21 6-2b 4. Power Window

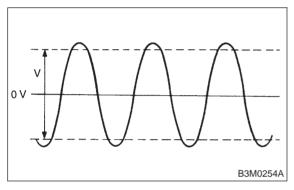
4) Measure signal voltage.

Terminals

NO

No. 1 — No. 2:





: Is the voltage more than 5 V? CHECK

: Repair or replace speedometer. YES)

: Replace vehicle speed sensor 2.

4. Power Window

A: DIAGNOSTICS PROCEDURE-1

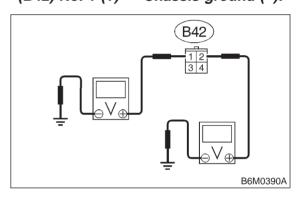
TROUBLE SYMPTOM

All door windows do not operate.

4A1: CHECK FUSE AND POWER SUPPLY.

- 1) Check fuse No. 15.
- 2) Disconnect connector of power window relay.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between power window relay connector and chassis ground.

Connector & terminal (B42) No. 1 (+) — Chassis ground (-):



: Is the voltage more than 10 V? CHECK

: Go to step 4A2. (YES)

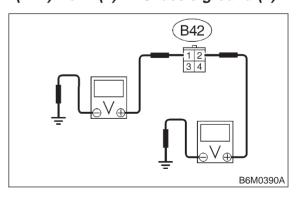
: Repair wiring harness or replace fuse or (NO)

circuit breaker. Go to step 4A2.

4A2: **CHECK FUSE AND POWER SUPPLY.**

Measure voltage between power window relay connector and chassis ground.

Connector & terminal (B42) No. 2 (+) — Chassis ground (-):



: Is the voltage more than 10 V?

: Go to step 4A3. YES

6-2b [T4A3] BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

4. Power Window

NO

: Repair wiring harness or replace fuse or circuit breaker.

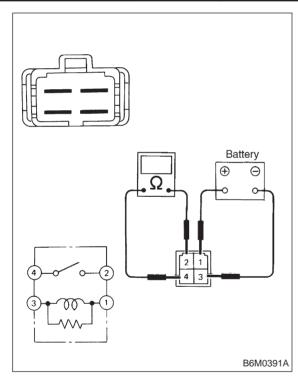
4A3: CHECK POWER WINDOW RELAY.

1) Disconnect connector of power window relay.

2) Connect battery to terminal No. 1 and ground terminal No. 3.

3) Check continuity between terminals.

When current flows.	Between terminals No. 2 and No. 4	
When current does not flow.	Between terminals No. 2 and No. 4	Continuity does not exist.
	Between terminals No. 1 and No. 3	



CHECK : Is power window relay normal?

YES : Go to step 4A4.

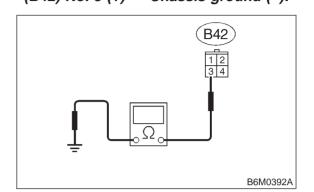
: Replace power window relay.

4A4: CHECK GROUND CIRCUIT OF POWER WINDOW RELAY.

1) Disconnect connector of power window relay.

2) Measure resistance of harness connector between power window relay and chassis ground.

Connector & terminal (B42) No. 3 (+) — Chassis ground (-):



(CHECK): Is the resistance less than 10 Ω ?

YES : Go to step 4A5.

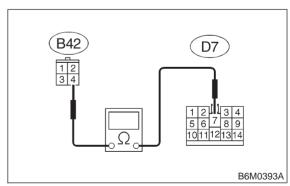
: Repair wiring harness.

4A5: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW RELAY
AND POWER WINDOW MAIN
SWITCH (DRIVER'S DOOR SWITCH).

1) Disconnect connectors of power window relay and power window main switch.

2) Measure resistance of harness connector between power window relay and power window main switch.

Connector & terminal (B42) No. 4 — (D7) No. 7:



(CHECK): Is the resistance less than 10 Ω ?

YES : Go to step 4A6.

No : Repair wiring harness.

BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

[**T4B3**] **6-2b** 4. Power Window

4A6: CHECK POWER WINDOW MAIN SWITCH.

Perform inspection of power window main switch. <Ref. to 6-2 [W17B1].>

CHECK : Is power window main switch normal?

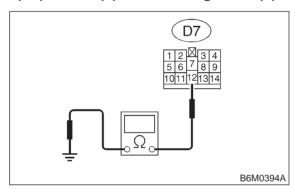
YES : Go to step 4A7.

: Replace power window main switch.

4A7: CHECK GROUND CIRCUIT OF POWER WINDOW MAIN SWITCH.

- 1) Disconnect connector of power window main switch.
- 2) Measure resistance of harness connector between power window main switch and chassis ground.

Connector & terminal (D7) No. 12 (+) — Chassis ground (-):



 $\widehat{\text{CHECK}}$: Is the resistance less than 10 Ω ?

: System circuit is normal.
: Repair wiring harness.

B: DIAGNOSTICS PROCEDURE-2

TROUBLE SYMPTOM

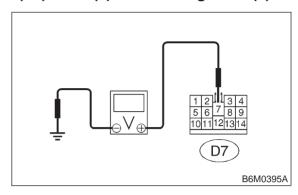
Only driver's door window does not operate.

4B1: CHECK POWER SUPPLY FOR POWER WINDOW MAIN SWITCH.

- 1) Disconnect connector of power window main switch.
- 2) Turn ignition switch to ON.

3) Measure voltage between power window main switch connector and chassis ground.

Connector & terminal (D7) No. 7 (+) — Chassis ground (-):



CHECK): Is the voltage more than 10 V?

FES: Go to step 4B2.

: Go to diagnostics procedure-1. <Ref. to 6-2b [T4A0].>

4B2: CHECK POWER WINDOW MAIN SWITCH (DRIVER'S DOOR SWITCH).

Perform inspection of power window main switch. <Ref. to 6-2 [W17B1].>

CHECK : Is power window main switch normal?

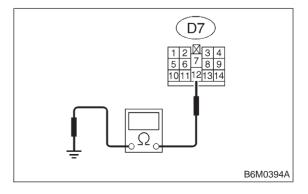
YES : Go to step 4B3.

: Replace power window main switch.

4B3: CHECK GROUND CIRCUIT OF POWER WINDOW MAIN SWITCH.

- 1) Disconnect connector of power window main switch.
- 2) Measure resistance of harness connector between power window main switch and chassis ground.

Connector & terminal (D7) No. 12 (+) — Chassis ground (-):



6-2b [T4B4] BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

4. Power Window

 $m _{CHECK}$: Is the resistance less than 10 Ω ?

Go to step 4B4.

(NO) : Repair wiring harness.

4B4: CHECK DRIVER'S DOOR WINDOW MOTOR.

1) Disconnect connector of power window motor (driver's door).

2) Make sure that power window motor rotates properly when battery voltage is applied to terminals of motor connector.

3) Change polarity of battery connections to terminals to ensure that motor rotates in reverse direction

CHECK : Is driver side power window motor normal?

YES : Go to step 4B5.

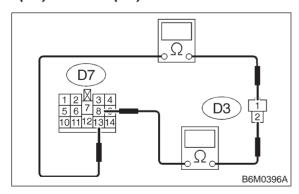
Replace driver side power window motor.

4B5: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW MAIN
SWITCH AND DRIVER'S DOOR WINDOW MOTOR.

1) Disconnect connectors of power window main switch and power window motor (driver's door).

2) Measure resistance of harness connector between power window main switch and power window motor.

Connector & terminal (D7) No. 8 — (D3) No. 2:



(CHECK): Is the resistance less than 10 Ω ?

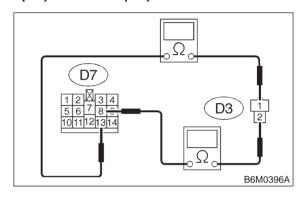
YES : Go to step 4B6.

: Repair wiring harness. Go to step 4B6.

4B6: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW MAIN
SWITCH AND DRIVER'S DOOR WINDOW MOTOR.

Measure resistance of harness connector between power window main switch and power window motor.

Connector & terminal (D7) No. 13 — (D3) No. 1:



(CHECK): Is the resistance less than 10 Ω ?

: System circuit is normal but mechanical trouble may be caused in door window system such as break of window regulator.

(NO) : Repair wiring harness.

C: DIAGNOSTICS PROCEDURE-3

TROUBLE SYMPTOM

One or more of passenger's door window do not operate.

4C1: CHECK POWER SUPPLY FOR POWER WINDOW SUB SWITCH WHICH IS OUT OF ORDER.

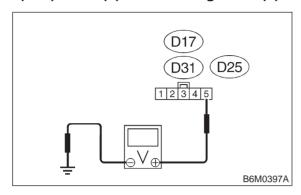
- 1) Disconnect connector of power window sub switch.
- 2) Turn ignition switch to ON.

BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

[T4C5] **6-2b** 4. Power Window

3) Measure voltage between power window sub switch connector and chassis ground.

Connector & terminal (D17) No. 5 (+) — Chassis ground (-):



CHECK : Is the voltage more than 10 V? (Front passenger side)

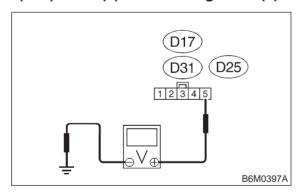
YES : Go to step 4C2.

(NO) : Repair wiring harness. Go to step 4C2.

4C2: CHECK POWER SUPPLY FOR POWER WINDOW SUB SWITCH WHICH IS OUT OF ORDER.

Measure voltage between power window sub switch connector and chassis ground.

Connector & terminal (D31) No. 5 (+) — Chassis ground (-):



CHECK : Is the voltage more than 10 V? (Rear RH side)

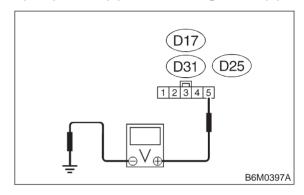
(YES): Go to step 4C3.

Repair wiring harness. Go to step 4C3.

4C3: CHECK POWER SUPPLY FOR POWER WINDOW SUB SWITCH WHICH IS OUT OF ORDER.

Measure voltage between power window sub switch connector and chassis ground.

Connector & terminal (D25) No. 5 (+) — Chassis ground (-):



CHECK : Is the voltage more than 10 V? (Rear LH side)

YES : Go to step 4C4.

: Repair wiring harness.

4C4: CHECK POWER WINDOW SUB SWITCH WHICH IS OUT OF ORDER.

Perform inspection of power window sub switch. <Ref. to 6-2 [W17B2].>

CHECK : Is power window sub switch normal?

YES : Go to step 4C5.

: Replace power window sub switch.

4C5: CHECK POWER WINDOW MOTOR WHICH IS OUT OF ORDER.

1) Disconnect connector of power window motor.

2) Make sure that power window motor rotates properly when battery voltage is applied to terminals of motor connector.

3) Change polarity of battery connections to terminals to ensure that motor rotates in reverse direction.

CHECK : Is passenger side power window motor normal?

YES : Go to step **4C6**.

Replace passenger side power window motor.

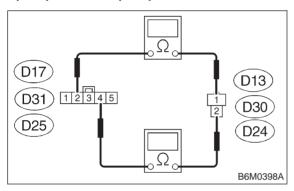
6-2b [T4C6] BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

4. Power Window

4C6: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND POWER WINDOW
MOTOR.

- 1) Disconnect connectors of power window sub switch and power window motor.
- 2) Measure resistance of harness connector between power window sub switch and power window motor.

Connector & terminal (D17) No. 2 — (D13) No. 1:



CHECK : Is the resistance less than 10 Ω ? (Front passenger side)

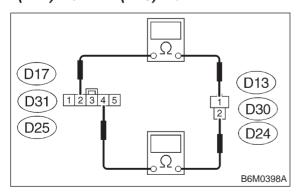
YES : Go to step 4C7.

Repair wiring harness. Go to step 4C7.

4C7: CHECK HARNESS CONNECTOR BETWEEN POWER WINDOW SUB SWITCH AND POWER WINDOW MOTOR.

Measure resistance of harness connector between power window sub switch and power window motor.

Connector & terminal (D17) No. 4 — (D13) No. 2:



CHECK : Is the resistance less than 10 Ω ? (Front passenger side)

YES : Go to step 4C8.

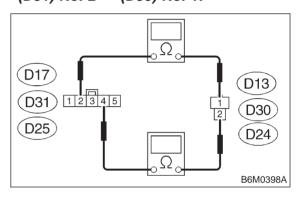
NO

: Repair wiring harness. Go to step 4C8.

4C8: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND POWER WINDOW
MOTOR.

Measure resistance of harness connector between power window sub switch and power window motor.

Connector & terminal (D31) No. 2 — (D30) No. 1:



CHECK : Is the resistance less than 10 Ω ? (Rear RH side)

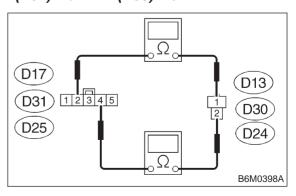
YES : Go to step 4C9.

(NO) : Repair wiring harness. Go to step **4C9**.

4C9: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND POWER WINDOW
MOTOR.

Measure resistance of harness connector between power window sub switch and power window motor.

Connector & terminal (D31) No. 4 — (D30) No. 2:



CHECK : Is the resistance less than 10 Ω ? (Rear RH side)

(YES) : Go to step 4C10.

BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS) [T4C13] 6-2b

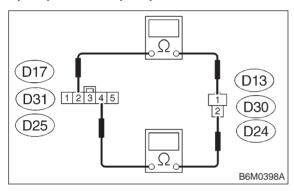
4. Power Window

: Repair wiring harness. Go to step **4C10**.

4C10: CHECK HARNESS CONNECTOR BETWEEN POWER WINDOW SUB SWITCH AND POWER WINDOW MOTOR.

Measure resistance of harness connector between power window sub switch and power window motor.

Connector & terminal (D25) No. 2 — (D24) No. 1:



CHECK : Is the resistance less than 10 Ω ? (Rear LH side)

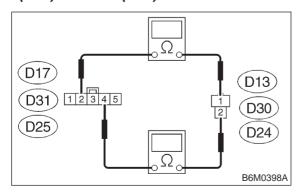
YES : Go to step 4C11.

: Repair wiring harness. Go to step **4C11**.

4C11: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND POWER WINDOW
MOTOR.

Measure resistance of harness connector between power window sub switch and power window motor.

Connector & terminal (D25) No. 4 — (D24) No. 2:



CHECK : Is the resistance less than 10 Ω ? (Rear LH side)

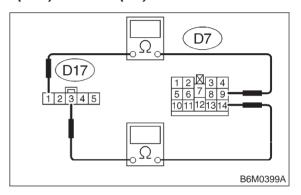
YES : Go to step 4C12.

No : Repair wiring harness.

4C12: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND MAIN SWITCH.

- 1) Disconnect connectors of power window sub switch and main switch.
- 2) Measure resistance of harness connector between power window sub switch and main switch.

Connector & terminal (D17) No. 1 — (D7) No. 9:



CHECK : Is the resistance less than 10 Ω ? (Front passenger side)

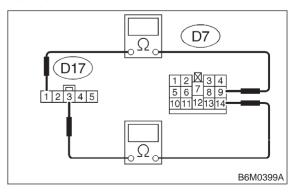
YES : Go to step 4C13.

(NO) : Repair wiring harness. Go to step 4C13.

4C13: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND MAIN SWITCH.

Measure resistance of harness connector between power window sub switch and main switch.

Connector & terminal (D17) No. 3 — (D7) No. 14:



CHECK : Is the resistance less than 10 Ω ? (Front passenger side)

Go to step 4C14.

6-2b [T4C14] BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS)

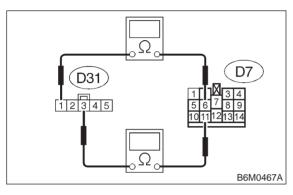
4. Power Window

: Repair wiring harness. Go to step **4C14**.

4C14: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND MAIN SWITCH.

Measure resistance of harness connector between power window sub switch and main switch.

Connector & terminal (D31) No. 1 — (D7) No. 6:



CHECK : Is the resistance less than 10 Ω ? (Rear RH side)

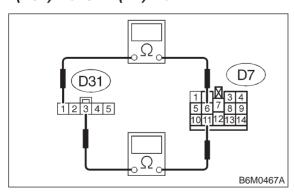
(YES) : Go to step 4C15.

(NO) : Repair wiring harness. Go to step 4C15.

4C15: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND MAIN SWITCH.

Measure resistance of harness connector between power window sub switch and main switch.

Connector & terminal (D31) No. 3 — (D7) No. 11:



CHECK : Is the resistance less than 10 Ω ? (Rear RH side)

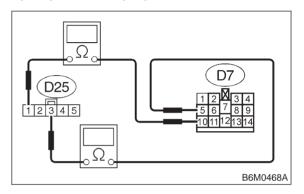
(YES) : Go to step 4C16.

: Repair wiring harness. Go to step **4C16**.

4C16: CHECK HARNESS CONNECTOR BETWEEN POWER WINDOW SUB SWITCH AND MAIN SWITCH.

Measure resistance of harness connector between power window sub switch and main switch.

Connector & terminal (D25) No. 1 — (D7) No. 10:



CHECK : Is the resistance less than 10 Ω ? (Rear LH side)

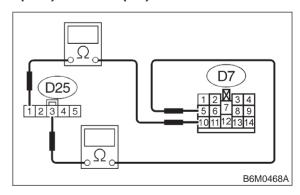
(YES) : Go to step 4C17.

(NO) : Repair wiring harness. Go to step 4C17.

4C17: CHECK HARNESS CONNECTOR
BETWEEN POWER WINDOW SUB
SWITCH AND MAIN SWITCH.

Measure resistance of harness connector between power window sub switch and main switch.

Connector & terminal (D25) No. 3 — (D7) No. 5:



CHECK : Is the resistance less than 10 Ω ? (Rear LH side)

YES : Go to step 4C18.

: Repair wiring harness.

BODY ELECTRICAL SYSTEM (ELECTRICAL PARTS) IT5A21 6-2b

5. Remote Controlled Rearview Mirror

CHECK POWER WINDOW MAIN 4C18: SWITCH.

Perform inspection of power window main switch. <Ref. to 6-2 [W17B1].>

(CHECK): Is power window main switch nor-

mal?

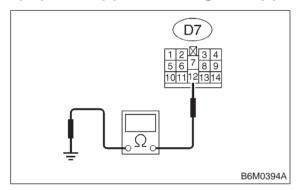
: Go to step **4C19**. (YES)

: Replace power window main switch. NO

4C19: **CHECK GROUND CIRCUIT OF** POWER WINDOW MAIN SWITCH.

- 1) Disconnect connector of power window main switch.
- 2) Measure resistance of harness connector between power window main switch and chassis around.

Connector & terminal (D7) No. 12 (+) — Chassis ground (-):



(CHECK): Is the resistance less than 10 Ω ?

: System circuit is normal but mechanical trouble may be caused in door window system such as break of window requlator.

: Repair wiring harness. NO

YES

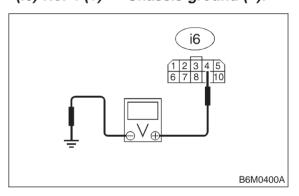
5. Remote Controlled Rearview **Mirror**

A: DIAGNOSTICS PROCEDURE

CHECK FUSE AND POWER SUPPLY FOR REMOTE CONTROLLED REAR-VIEW MIRROR SWITCH.

- 1) Check fuse No. 3.
- 2) Disconnect connector of rearview mirror switch.
- 3) Turn ignition switch to ON.
- 4) Measure voltage between rearview mirror switch connector and chassis ground.

Connector & terminal (i6) No. 4 (+) — Chassis ground (-):



: Is the voltage more than 10 V? CHECK)

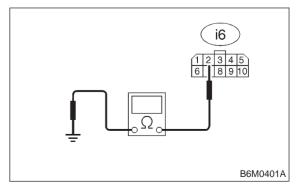
YES : Go to step 5A2.

: Replace fuse or repair wiring harness.

CHECK GROUND CIRCUIT OF REAR-5A2: VIEW MIRROR SWITCH.

- 1) Disconnect connector of rearview mirror switch.
- 2) Measure resistance of harness connector between rearview mirror switch and chassis ground.

Connector & terminal (i6) No.2 (+) — Chassis ground (-):



: Is the resistance less than 10 Ω ?